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APPLICANT: William R. Voigt et al
SERIAL NO: 09/776,025
FILED: January 19, 2001
FOR: HELICAL ROTARY CUTTER AND METHOD

Commissioner for Patents
BOX NON-FEE AMENDMENT
Washington, D.C. 20231

May 4, 2001

S i r:

PRELIMINARY AMENDMENT

Prior to the first action on this application,
please amend this application as follows:

Please add the following abstract.

Add the following claims:

7. A helical rotary cutter comprising:

a rotor having an outer surface, a left end, a right end, a rotor axis, a left end bearing support concentric with the rotor axis and extending axially to the left of the left end, and a right end bearing support concentric with the rotor axis and extending axially to the right of the right end;

at least one groove in said rotor extending from the left end to the right end;

a first groove wall in a first wall plane extending

CERTIFICATION 37 C.F.R. 1.8a and 1.10
(Express Mail Label number is mandatory)
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I hereby certify that, on the date shown below, this correspondence is being:

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37 C.F.R. 1.8a

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axially from the left end wall to the right end wall, extending outward away from the rotor axis and in the direction of rotation, and wherein said first wall plane intersects the rotor axis;

a plurality of first base support surfaces, that are each in a base support plane that is perpendicular to the first wall plane and wherein all the base support planes that are perpendicular to said first groove wall intersect each other;

a plurality of first rectangular flat cutter blades each of which has a left blade end, a right blade end, a cutting edge and a base that is parallel to the cutting edge and wherein the base of each of the plurality of first rectangular cutter blades is seated on one of the plurality of first base support surfaces;

a second groove wall in a second wall plane extending axially from the left end wall to the right end wall, extending outward away from the rotor axis and in the direction of rotation, and wherein said second wall plane intersects the rotor axis;

a plurality of second base support surfaces, that are each in a second base support plane that is perpendicular to the second wall plane and wherein all the second base support planes that are perpendicular to said second wall plane intersect each other;

a plurality of second rectangular flat cutter blades each of which has a left blade end, a right blade end, a cutting edge and a base that is parallel to the cutting edge

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and wherein the base of each of the plurality of second rectangular flat cutter blades is seated on one of the plurality of second base support surfaces; and

a plurality of clamp members each of which clamps one of said plurality of first rectangular flat cutter blades to one of the plurality of first base support surfaces, and clamps one of said plurality of second rectangular flat cutter blades to one of the plurality of second base support surfaces.

8. A helical rotary cutter as set forth in claim 7 wherein said rotor has a plurality of grooves that are identical to and angularly spaced from the at least one groove, about the rotor axis.

9. A helical rotary cutter as set forth in claim 7 wherein the plurality of first base support surfaces includes four first base support surfaces; and the plurality of second base support surfaces includes four second base support surfaces.

10. A helical rotary cutter as set forth in claim 9 wherein said rotor has a plurality of grooves that are identical to and angularly spaced from the at least one groove, about the rotor axis.

11. A method of making a helical rotary cutter comprising machining a plurality of grooves in a steel cylinder that are angularly spaces from each other about a rotor axis;

machining a first groove wall, in each of said plurality of grooves, that is in a first wall plane extending

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axially from a left cylinder end wall to a right cylinder end wall, extending outward away from the rotor axis, and wherein said first wall plane intersects the rotor axis;

machining a plurality of first base support surfaces, in each of said plurality of grooves, that are each in one of a plurality of first base support planes that are perpendicular to the first wall plane and with the plurality of first base support planes, intersecting each other and wherein a right end and a left end of each of the first base support surfaces are spaced equal distances from said rotor axis;

machining a second groove wall, in each of said plurality of grooves, that is in a second wall plane extending axially from the left cylinder end wall to the right cylinder end wall, extending outward away from the rotor axis, and wherein said second wall plane intersects the rotor axis;

machining a plurality of second base support surfaces in each of said plurality of grooves, that are each in one of a plurality of second base support planes that are perpendicular to the second wall plane and with the plurality of second base support planes intersecting each other and wherein a right end and a left end of each of the second base support surfaces are spaced equal distances from said rotor axis;

mounting a first rectangular flat cutter blade with a first cutter base that is parallel to a first cutter cutting edge on each of said plurality of first base support surfaces;

mounting a second rectangular flat cutter blade with

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a second cutter base that is parallel to a second cutter cutting edge on each of said plurality of second base support surfaces; and

clamping the first rectangular flat cutter blades and the second rectangular flat cutter blades in the plurality of grooves.

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REMARKS

Consideration of this application as amended prior to examination on the merits is respectfully requested.

It is believed that this application now is in condition for allowance. Further and favorable action is requested.

The Patent Office is authorized to charge or refund any fee deficiency or excess to Deposit Account No. 12-0755.

Respectfully submitted,

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